Manitoba
Aerospace Technology

Capability Directory

For further information on Manitoba's Aeropspace Capabilities or the Manitoba Aerospace Technology Program contact:

Manitoba Aerospace Technology Program
430 - 155 Carlton Street
Winnipeg, Manitoba
Canada
R3C 3H8

Phone: (204) 945-0127
FAX: (204) 945-1793

Manitoba
Industry, Trade
and Tourism

ACQUIRING THE BENEFITS OF THE CANADIAN SPACE PROGRAM

The Canadian Space Program, a four-point approach to active participation in the development of the U.S. space station, communications, remote sensing and space science, offers the potential for significant benefits to Canadian industrial interests of all sizes. In addition, a wide variety of international commercial space projects offers new business opportunities.

For many industrial concerns, the concept of participation in space programs is novel, and perhaps intimidating.

However, a careful examination by industry of the Canadian and international space programs reveals a broad range of industrial opportunities with subsequent industrial spinoff benefits, which should leave the smaller industrialist enthused about this new and challenging venture.

With that in mind, the Manitoba government, through the Department of Industry, Trade and Tourism, has launched the Manitoba Aerospace Technology Program, to encourage and assist Manitoba industry in the pursuit of space program-related contract work, to maximize the benefits that flow from such a prodigious venture as the space program, and to demonstrate to program directors the diversity and capabilities of Manitoba's industrial sector.

The program is assisting Manitoba industry by making available all information pertaining to the federal, NASA and other program requirements, as well as information integral to the proper completion of tendering applications, and by assisting industry in liaising with subcontractors.

The full range of departmental services and personnel is available to assist industry in its endeavours.

It is the intent of the program to familiarize space contractors with Manitoba's broad history of involvement in the aerospace industry. And the program will show Manitoba's well-deserved reputation for quality, value, efficiency and excellence in all facets of aerospace work.

The program will show how Manitoba industry and government have built a solid and highly technical infrastructure to serve those seeking or distributing space contract work. Manitoba has the services and facilities needed, ranging from business and industrial incubators, to testing laboratories, to technical and research support, as well as departmental entrepreneurial counselling services.

This publication is an illustration of the potential of Manitoba industry, showing contractors and subcontractors, and Manitoba industrial interests as well, the scope and expertise available in Manitoba.

It is the belief of the Manitoba Aerospace Technology Program that this document will provide impetus to further investigation and inquiries by contractors, subcontractors, other industrial interests and entrepreneurs, and will help in the networking process, so vital to the success of all Manitoba industry.

For Manitoba, the space program represents an opportunity to maximize the potential of the province's aerospace industry, and to encourage its greater diversification.

For the contractors and subcontractors associated with the Canadian Space Program, this is an opportunity to maximize the value and quality of contract work.

Quite simply, all of Canada benefits from Manitoba's full and equitable participation in the space program.

90-06253//

MANITOBA AEROSPACE TECHNOLOGY PROGRAM

For more than fifty years, the Province of Manitoba has been a proud and dynamic contributor to the Canadian aerospace industry, consistently demonstrating our capability and competency on the leading edge of aerospace-related technological developments.

A glance at Manitoba's track record in aerospace reveals pioneering and innovative advances in rocket design, in upper atmospheric balloon experimentation, in satellite structural and component work, in remote sensing and data transmission, and in propellants, exotic material fabrication, and biotechnology.

Manitoba's aerospace sector remains a vibrant and innovative economic performer, and is well positioned to benefit from many of the peaceful applications of space technology, including communications, environmental monitoring, remote sensing and data analysis.

The Manitoba Aerospace Technology Program is in place to encourage and assist the province's industrial, business and educational sectors in acquiring and maximizing benefits flowing from the Canadian Space Program, in order to bring greater industrial diversification and economic growth to Manitoba.

The 24-minute flight of a Bristol three-stage BLACK BRANT XC launched for NASA from Alaska, showing ignition, separation and flight of each stage. Aurora Borealis can be seen in the background.

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CAD Systems
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Cybershare Management Inc.
Export Packers Co. Ltd.
Homestead Computer Services Ltd.
ICAM Technologies Corporation
Integrated Engineering Software Ltd.
Kraus Industries Ltd.
Linear Systems Ltd.
MCALC
Mind Computer Products
Northern Aero Industries Limited
Pulse Engineering Ltd.
Quantic Laboratories Inc.
S.D.S. Technical Devices Ltd.
SHL Systemhouse Inc.
SOTA Electronics Corporation
Total Software Inc.
UNISYS Canada Inc.
Universal Robotics Corporation
Vadeko International Inc.
Vansco Electronics Ltd.

METALS & COMPOSITES/FABRICATION

Aerotech International Incorporated
Boeing of Canada Ltd.
Canadian Tool & Die Ltd.
Composite Technology (Canada) Ltd.
Custom Steel Products Inc.
Dimatec Inc.
EPT Manufacturing Ltd.
Fort Garry Industries Ltd.
Franklin Enterprises Ltd.
Heli Fab Ltd.
Inventronics Limited
K & S Tool & Die Ltd.
Manitou Manufacturing Co. Ltd.
Spectrum Manufacturing Co. Ltd.
Spiroll Kipp Kelly (1984) Inc.
Standard Aero Limited
Standard Machine Works Ltd.
Technical Products International Ltd.
Vanguard Industries

MATERIALS/COATINGS/HEAT TREATING

Cadorath Plating Co. Ltd.
Guertin Bros. Coating & Sealants Ltd.
Plasma and Flame Coatings Ltd.
Precise-To-Form Castings Inc.

ENGINEERING CONSULTANTS/R&D LABS

Aero Consulting Services Ltd.
A.J.P. Engineering Services
Canadian Food Products Development Centre
Industrial Technology Center
Infotech Manitoba
Institute for Technological Development
Iris Systems Inc.
Ketas Canada Inc.
Lester M. Glantz, P.Eng.
The Microelectronics Centre of Manitoba
Midwest Power Products
Red River Community College
South Winnipeg Technical Centre
Spiece Associates Inc.
Tarry & Associates Ltd.
Technical Research Investigations & Development (TRIAD) Ltd.
UMA Engineering Ltd.
Unies Ltd.
University of Manitoba Accelerator Centre
The University of Manitoba
(Department of Mechanical Engineering and Industrial Engineering Program)
The University of Manitoba
(Geophysical Imaging Laboratory)
West-Can Inspection Limited
G.K. Yuill & Associates Ltd.

PROJECT MANAGEMENT

Atomic Energy of Canada
Bristol Aerospace
Wardrop Engineering Inc.

MANITOBA AEROSPACE COMPANY MATRIX

Note: ● Indicates primary strength (as it relates to space programs)
○ Indicates other strong capabilities

	Remote Sensing Communications SIC - 366, 489, 737	Electronics Biotechnology Software SIC - 3573, 367, 7391, 737	Metals & Composites Fabrication SIC - 339, 282, 307, 349	Materials Coatings & Heat Treating SIC - 285, 3299, 332, 336, 339, 346, 347	Engineering Consultants R&D Labs SIC - 38, 7397, 891, 892	Project Management SIC - 372, 376, 966
ABI BIOTECHNOLOGY INC. (7391)		●				
ADVANCED APPLICATIONS INC. (7391)		●				
AERO CONSULTING SERVICES LTD. (891)					●	
AEROTECH INTERNATIONAL INCORPORATED (3629)			●		○	
AIRQUEST RESOURCE SURVEYS LTD. (739)	●					
A.J.P. ENGINEERING SERVICES (891)					●	
ATOMIC ENERGY OF CANADA (966)		○	○	○	○	●
BIOQUEST INTERNATIONAL (7391)		●				
BOEING OF CANADA (372, 376)			●			○
BRISTOL AEROSPACE (372, 376)	○	○	○	○	○	●
CAD SYSTEMS (737)		●				
CADORATH PLATING CO. LTD. (347)				●		
CANADIAN FOOD PRODUCTS DEVELOPMENT CENTRE (966)		○			●	○
CANADIAN TOOL AND DIE LTD. (349)			●			
CANMAG, CANADIAN ELECTROMAGNETICS LTD. (349)		●	○			
CANADIAN INSTITUTE OF INDUSTRIAL TECHNOLOGY (966)		●	○		○	○
CLINICOM COMPUTING SERVICES (737)		●				
COMPOSITE TECHNOLOGY CANADA LTD. (282)			●			
CURLE GEOGRAPHIC SERVICES (737)	●					
CUSTOM STEEL PRODUCTS INC. (349)			●			
CYBERSHARE MANAGEMENT INC. (737)		●				
DIMATEC INC. (349)			●			
ELECTROMAGNETIC SENSING AND INTERPRETATION (737)	●					
EM WAVE TECHNOLOGY LTD. (366)	●	○				
EPT MANUFACTURING LTD. (349)			●			
EXPORT PACKERS CO. LTD. (7391)		●				
FORT GARRY INDUSTRIES LTD. (347)			●	○		
FRANKLIN ENTERPRISES LTD. (349)			●			
GPT (CANADA) (366)	●	○				
GLANTZ, LES (891)					●	
GUERTIN BROS. COATING & SEALANTS LTD. (285)				●		
HELI FAB LTD. (349)			●			
HOMESTEAD COMPUTER SERVICES LTD. (737)	○	●				
ICAM TECHNOLOGIES CORPORATION (737)		●				
INDUSTRIAL TECHNOLOGY CENTRE (966)		○	○		●	○
INFOTECH MANITOBA (892)					●	
INSTITUTE FOR TECHNOLOGICAL DEVELOPMENT (892)					●	
INTEGRATED ENGINEERING SOFTWARE LTD. (737)		●				
INVENTRONICS LTD. INTERNATIONAL (367)		○	●			
IRIS SYSTEMS (891)					●	
KETAS CANADA INC. (891)					●	
K & S TOOL & DIE LTD. (349)			●			
KRAUS INDUSTRIES LTD. (367)		●				
LINEAR SYSTEMS LTD. (737)		●				
MACLAREN PLANSEARCH INC. (737)	●					
MANITOBA REMOTE SENSING CENTRE (737)	●					
MANITOBA TELEPHONE SYSTEM (366)	●					
MANITOU MANUFACTURING CO. LTD. (349)			●			
MCALC (737)		●				
THE MICROELECTRONICS CENTRE OF MANITOBA (892)					●	
MIDWEST POWER PRODUCTS (891)					●	
MIND COMPUTER PRODUCTS (737)		●				
NORTHERN AERO INDUSTRIES LTD.		●				
PLASMA FLAME COATINGS LTD. (347)				●		
PRAIRIE AGRI PHOTO LTD. (737)	●					
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PULSE ENGINEERING LTD. (367)		●				
QUANTIC LABORATORIES INC. (367)		●				
RED RIVER COMMUNITY COLLEGE (966)		○	○		●	
S.D.S. TECHNICAL DEVICES LTD. (367)		●				
SHL SYSTEMHOUSE INC. (737)		●				
SOTA ELECTRONICS CORPORATION (737)		●				
SOUTH WINNIPEG TECHNICAL CENTRE (966)					●	○

MANITOBA AEROSPACE COMPANY MATRIX (Cont'd)

Note: ● Indicates primary strength (as it relates to space programs)
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SPECTRUM MANUFACTURING CO. LTD. (349)		○	●	○		
SPIECE ASSOCIATES INC. (891)					●	
SPIROLL KIPP KELLY (1984) INC. (349)		○	●			○
STANDARD AERO LIMITED (372)			●	○		○
STANDARD MACHINE WORKS LTD. (349)			●			
TARRY & ASSOCIATES LTD. (891)					●	
TECHNICAL PRODUCTS INTERNATIONAL LTD. (366)		○	●	○		
TECHNICAL RESEARCH INVESTIGATIONS & DEV. (TRIAD) LTD. (891)		○		○	●	
TOTAL SOFTWARE INC. (737)		●				
UMA ENGINEERING LTD. (891)	○	○			●	○
UNIES LTD. (891)	○	○			●	
UNISYS CANADA INC. (367)		●			○	
UNIVERSAL ROBOTICS CORPORATION (3559)		●				
UNIVERSITY OF MANITOBA, ACCELERATOR CENTRE (892)					●	
U OF M, DEPT. OF MECH. ENG. AND IND. ENG. PROGRAM (966)					●	○
UNIVERSITY OF MANITOBA, GEOPHYSICAL IMAGING LABORATORY (892)		○			●	
VADEKO INTERNATIONAL INC. (3559)		●		○		
VANGUARD INDUSTRIES (282)			●			
VANSCO ELECTRONICS LTD. (367)	○	●			○	
VISUAL MARKETING LTD. (489)	●					
WARDROP ENGINEERING INC. (966)	○	○			○	●
WEATHERTEC SERVICES INC. (737)	●					
WEST-CAN INSPECTION LIMITED (7397)					●	
YUILL, G.K. & ASSOCIATES LTD. (891)					●	○

REMOTE SENSING/COMMUNICATIONS

AIRQUEST RESOURCE SURVEYS LTD.

147 Hamelin Street
Winnipeg, Manitoba
R3T 3Z1

Ph: (204) 284-3101
Fax: (204) 453-8608

Contact:
Mr. W. Sapielo, Vice President — Marketing

Description:
Airquest Resource Surveys Ltd. is engaged primarily in the procurement of large format aerial photography using precision aerial survey cameras and black and white (panchromatic), colour and false-colour (infra-red) films. The overlapping photographs provide for steroscopic imagery used by Airquest and various government agencies for the production of topographic mapping. Airquest is equipped with "state of the art" technology for the production of mapping in digital formats and the plotting of maps, cross-sections, profiles etc. using a WILD TA10 precision flat-bed plotting table. The Company has a photographic laboratory for the processing of aerial films, for contact printing and the production of large format copies from aerial photography and photo-mosaics.

Featured Equipment:
- WILD A8 stereoplotting instruments
- Data General MV7800 computer
- IBM/MS/DOS Micros
- Tektronics graphic display terminals
- Wild TA10 automatic flatbed plotting table
- Cessna 310L photographic survey aircraft
- WILD RC8 9"x9" photographic survey camera
- 40"x40" horizontal copy camera

Facilities:
6,750 sq. ft. in Fort Garry Industrial Park

Major Clients:
Federal and Provincial Government Agencies
Environmental Protection Agencies
Consulting Engineers and Planners
Forest Management Companies
Major Mining Companies

Employees: 15

CURLE GEOGRAPHIC SERVICES

3456 Grant Avenue
Winnipeg, Manitoba
R3R 3P6

Ph: (204) 831-0692

Contact:
Mr. Wayne Curle, President

Description:
Curle, a consulting service offering mapping services, is currently conducting wetlands contour mapping for Ducks Unlimited Canada. Curle specializes in topographic and hydrographic mapping using interpretive contouring techniques (non-photogrammetric). Curle is versed in thematic and planimetric mapping as well as the interpretation of panchromatic, true colour, false colour, and black and white infra-red existing aerial photography. Curle is qualified in mosaic mapping, cartographic drafting, and remote sensing.

Major Clients:
Ducks Unlimited Canada; Manitoba Government; Royal LePage Real Estate; Anderson Management Ltd.

ELECTROMAGNETIC SENSING AND INTERPRETATION

125 Queenston Street
Winnipeg, Manitoba
R3N 0W4

Ph: (204) 489-7115

Contact:
Mr. Dave Barber, Principal
Mr. Klaus Hochheim, Technical Director

Description:
EMSI is an environmental research company specializing in applied remote sensing. EMSI is involved in development and application of remote semsing techniques for water quality and sea ice investigations, the detection and enumeration of arctic marine mammals, and photogrammetric surveys for engineering and wildlife applications. EMSI has extensive experience in the acquisition and interpretation of airborne photographic and thermal imagery, and a broad background of experience using digital Landsat, NOAA, and Synthetic Aperture Radar (SAR) imagery. EMSI provides resource managers with cost effective quantitative resource information.

Head Office is located in Winnipeg; Branch Office is located in Waterloo, Ontario.

Major Clients:
Department of Fisheries and Oceans; Environment Canada; Energy Mines and Resources; Manitoba Natural Resources; Manitoba Remote Sensing Centre

Employees: 4

EM WAVE TECHNOLOGY LTD.

8 Miami Place
Winnipeg, Manitoba
R3T 3T9 Ph: (204) 474-9603

Contact:
Mr. E. Bridges
Dr. L. Shafai

Description:
Emwave has provided specialist design studies for an electromagnetic anechoic chamber facility for the Canadian Defence Research Establishment, Suffield, Alberta. The firm has experience in antenna phased array studies, antenna feed design, and the development of a radar antenna for the Department of Fisheries and Oceans. Emwave offers specialized R&D support for engineering projects using electromagnetic wave technology. Personnel have experience in antennas, radio and microwave frequency transmission circuits and systems, including the design, analysis, numerical modeling and optimization of systems. It also has experience in the development and management of testing procedures, and interpretation and reporting on test data for prototype components and systems.

Major Clients:
Bristol Aerospace, Winnipeg; Defence Research Establishment, Suffield; Waterloo Research Institute; Danex Micro Inc.; Department of Fisheries and Oceans

Employees: 2

GPT (CANADA)

419 Notre Dame Avenue Ph: (204) 942-7221
Winnipeg, Manitoba Telex: 07-57-588
R3B 1R3 Fax: (204) 943-6183

Contact:
Mr. R.A. Ashman, President
Mr. D. Pincock, Sales Manager

Description:
GPT is involved in the manufacturing and marketing of advanced telecommunications equipment including video conferencing Codecs and room equipment, telephones, key systems, PABX systems, digital switches, Smart IC cards, and transportable satellite earth terminals. GPT's British parent firm has experience in designing and manufacturing military communications systems (e.g. Encrypted Transportable Trans-Horizon Microwave Systems), radio systems, radar systems, meteorological systems, and aeronautical training and simulation systems. The firm has full capabilities in PCB manufacturing, metal fabrication and cable forming, as well as design and development engineering staff and facilities.

Facilities:
Manufacturing — 16,000 sq. ft.
Engineering — 5,000 sq. ft.
Marketing and Sales — 6,000 sq. ft.
Administration — 2,000 sq. ft.

Major Clients:
National Research Council of Canada; Bell Telephone; Mountain Bell; GTE; Canadian Telephone Companies.

Employees: 61

MACLAREN PLANSEARCH INC.

Ste. 640, 5 Donald Street
Winnipeg, Manitoba
R3L 2T4 Ph: (204) 477-6650

Contact:
Mr. J.M. McKernan, Branch Manager, Principal Scientist

Description:
MacLaren, specializing in environmental impact analyses, ecological monitoring, water quality studies, and remote sensing interpretation, has much experience in the routine use of satellite-derived digital data. The firm has served as technical advisor to a Program Advisory Board responsible for the design and management of a five year program, including remote sensing projects, of ecological monitoring of hydro development impacts on Northern Manitoba. It has provided environmental impact and remediation research for the Canadian Department of National Defence. MacLaren has interests in expanding the use of relevant satellite/airborne/shuttle derived data, focussing at present on ice-related applications. MacLaren is participating in a state-of-the-art evaluation of integrated microwave ("X," "C," "L" bands), TM, and SPOT data for modelling, monitoring, and management of ice dynamics in northern and central Manitoba, in association with the Canada Centre for Remote Sensing and the Manitoba Remote Sensing Centre.

MacLaren Plansearch is a national firm comprised of 124 professional staff, and is part of the Canadian multinational Lavalin Group of companies.

It is recognized in EOSAT's inaugural "Directory of LANDSAT — Related Products and Services; International Edition — 1987." MacLaren is also engaged in a 4-year study to route a 500 kV DC transmission line through largely unstudied territory in central and northern Manitoba, using LANDSAT, TM, MEIS, and SPOT digital data. MacLaren is also listed in a compendium of national firms having recognized competence in the aerospace industry published by the newly created Federal Department of Industry, Science and Technology.

Facilities:
Local offices for staff of fifteen (including principal, senior and junior P.Eng.'s, M.Sc.'s, Ph.D., an M.E.Sc., a Mapper/Cartographer and a Dipl. Nat. Res. Mgmnt. Am M. Nat. Res. Mgmt.); complete drafting equipment; IBM PS/2 model 80 at 20 MHz operation, 20 MHz math coprocessor, 2 Meg Ram, 110 hard disk, VGA high resolution graphics, 14" and 19" high resolution color monitors, local area network, FAX, 18x12 digitizer pad and mouse, 1 Meg memory spooler, HP7595 Draft Master plotter, HP laser printer; IBM PC 640K RAM with 20 Mb. hard disk and assorted software; modem link to national VAX system; access to AUTOCAD and various other computer-based technologies.

Major Clients:
Canadian Department of National Defence; Canada Department of Environment; Manitoba Hydro; Federal and Provincial Governments, ALCAN, ALCOA, Canadian Forestry Service, City of Winnipeg

Employees: 16 locally (124 nationally)

MANITOBA REMOTE SENSING CENTRE

1007 Century Street
Winnipeg, Manitoba
R3H 0W4 Ph: (204) 945-6597

Contact:
Mr. W.G. (Bill) Best, Chief

Description:
The Manitoba Remote Sensing Centre is technologically equipped to map and monitor natural resources, and compile crop condition data in Canada and internationally. Centre personnel are experienced in the use of Image Analysis Systems for satellite data assessment, air photo interpretation, and are familiar with various airborne sensors. Staff have experience in using Landsat and NOAA data, and future plans include the use of systems such as RADARSAT and SPOT. The Centre is working to expand its work in remote sensing relative to agricultural data, natural resource mapping and environmental monitoring.

Will participate on a joint venture basis with companies engaged in remote sensing activities.

Major Clients:
Canada Centre for Remote Sensing; Statistics Canada; Canadian Forestry Service; Canadian Wheat Board; Canada Agriculture; Department of Fisheries & Oceans; Department of Natural Resources, Manitoba; Manitoba Department of Agriculture; Manitoba Hydro; Saskatchewan Research Council; Department of Natural Resources, North West Territories

Employees: 6

MANITOBA TELEPHONE SYSTEM

Technology Development — B609
489 Empress Street
P.O. Box 6666 Ph: (204) 941-8492
Winnipeg, Manitoba T.W.X.: 610-671-0566
R3C 3V6 Fax: (204) 956-0836

Contact:
Markku Murtonen, Manager, Technology Planning

Description:
MTS, a major participant in Telesat Canada and Telecom Canada, has extensive experience in earth station and satellite supported telecommunication services. It is a participant in the opportunity assessment of Mobile Satellite (MSAT) remote area services, and serves as advisor to DOC in the review of MSAT & other radio spectrum issues. Through chairmanship of National Study Group 8, CCIR, (Mobile Services), MTS is a direct participant in national and international dialogue and developments in Land Mobile, Mobile Satellite, Radio Amateur Mobile, Maritime Mobile and Aeronautical Mobile systems and services.

PRAIRIE AGRI PHOTO LTD.

292 Main Street
P.O. Box 817
Carman, Manitoba
R0G 0J0 Ph: (204) 745-2009

Contact:
Mr. Jack McKinnon, President/Director

Description:
Prairie Agri Photo specializes in infrared aerial photography and "scenic" aerial photography. Infrared aerial photography enables grain and fruit producers to assess their crops' strengths and weaknesses quickly and accurately. They also offer consulting services on the design and implementation of remote sensing programs on practical matching and data needs and available technologies; and on decisions related to technology transfer.

Featured Equipment:
A Cessna 172 aircraft, four Hasselblad 70 mm. IR camera systems and three 6 cm. x 7 cm. Pentax medium format systems.

Facilities:
Administrative office and full dark room.

Subsidiaries:
Winterhaven, Florida, U.S.A.

Employees: 7

VISUAL MARKETING LTD.

E-1420 Clarence Avenue
Winnipeg, Manitoba
R3T 1T6 Ph: (204) 284-0815

Contact:
Keith McKenzie, President
Darlene Mulligan, Marketing Manager

Description:
Visual Marketing Ltd. produces professional video programs, specializing in corporate communications. They have extensive experience in training, marketing, sales, promotional & conceptual programming for private and public corporations. In addition to full broadcast production facilities, they handle scripting, language translations, world standards conversions (PAL-SECAM-NTSC), video tape duplication & film to video tape transfers.

Facilities:
600 sq. ft. sound studio, cameras, lighting, special effects, editing equipment, electronic field production and 16 track recording. Recent upgrades: high resolution computer graphics (35ns), ADO digital video, 2nd editing suite, sound track creation with digital sampling and computerized editing.

Major Clients:
Boeing of Canada, Noranda Explorations, McKim Advertising, Canada Safeway.

Employees: 5 full time/freelance specialists employed on a per project basis.

WEATHERTEC SERVICES INC.

550 Berry Street
Winnipeg, Manitoba
R3H 0R9 Ph: (204) 786-4680

Contact:
Mr. John Junson, General Manager

Description:
WeatherTec Services Inc. is a meteorological company serving Industry, Media and Agriculture. This company provides weather consulting and forecasting services by producing computer graphic weather maps and extended forecasts, along with climatological studies of past weather conditions. We have access to all past and current hourly weather reports of temperature, sky condition, precipitation, wind and sunshine. Specialized forecasts can be tailored to specific needs.

Facilities:
WeatherTec offices are located in the Cybershare Computer Centre at 550 Berry Street in Winnipeg. Our computers have direct connection to AES weather circuits and the National Weatherfax Network.

Major Clients:
Grassroots Information Services, Inter-City Gas Co., Manitoba Public Insurance Corp.

Employees: 4

ABI BIOTECHNOLOGY INC.

40 Scurfield Blvd.
Winnipeg, Manitoba
R3T 0P4

Ph: 488-4090
Fax: (204) 488-4063

Contact:
Dr. B. Friesen, President
Dr. J. Langstaff, Vice President of Research

Description:
ABI is primarily a research and development laboratory, with specific interest in biological R & D. It is involved in the production of protein-based pharmaceuticals through the biotechnologies of genetic engineering and monoclonal antibodies from mammalian cells in culture.

History:
Founded in 1984 by A.D. Friesen.

Facilities:
Fully equipped 14,000 sq. ft. laboratory

Major Clients:
Ortho Diagnostics Systems Inc., Toronto
Waitaki International Biosciences, Toronto
Winnipeg Rh Institute, Winnipeg
Apotex Pharmaceuticals, Toronto
Biotechnology General Inc., New York

Employees: 31

ADVANCED APPLICATIONS INC.

#03-301 Nassau Street
Winnipeg, Manitoba
R3L 2J5

Ph: (204) 453-4959

Contact:
Dr. Brian D. Prystupa, President

Description:
Advanced Applications is a specialized operation, developing prototypes of high technology wheelchairs, as well as other mobilization aids for the handicapped. Advanced is interested in the development of programming concepts for high level control of machines in space.

Featured Equipment:
Computer programming concepts based on insect/animal learning and intelligence.

Facilities:
Office CAD computer and subcontracted facilities.

Employees: 2

BIOQUEST INTERNATIONAL

3-1329 Niakwa Road East
Winnipeg, Manitoba
R2J 3T4

Ph: (204) 254-0712
Fax: (204) 254-0712

Contact:
Dr. Martin Samoiloff, Research Director

Description:
Environmental Biotechnology, specializing in biomonitoring. Bioquest performs standard mandated and innovative new bioassays of soils, waters and wastes. As well, Bioquest has been a leader in the development of biological methods for the evaluation of workplace and residential air quality, protocol development, and establishment of QA/QC procedures.

Featured Product:
Bioquest Air Sampler System, for objective evaluation of toxicological properties of indoor air.

Featured Equipment & Facilities:
Holding facilities for bacteria, invertebrates and fish. Microtox facilities. Standardized and genetically-engineered stock species.

Major Clients:
North American Rockwell International, Alberta Energy Resources Board, Environment Canada, Illinois State Natural History Survey, National Research Council of Canada, Petro-Canada, Western Research, Enviro-Test Laboratories

Employees: 8

CAD SYSTEMS

435 Ellice Avenue
Winnipeg, Manitoba
R3B 1Y6

Ph: (204) 943-6673
Fax: (204) 943-1568

Contact:
Mr. Allen Lee, President

Description:
CAD Systems is an innovative firm specializing in IBM compatible software development, two and three dimensional business graphics and CAD systems.

Featured Equipment:
Sperry IT's; IBM PS2 Model 80 micro; H.D. coloured pen plotter; Apple laser plotter; XT, AT and compatibles

Major Clients:
Northern Telecom; National Research Council of Canada; AT&T; Martin Marietta; Lockheed

Employees: 4

CANADIAN INSTITUTE OF INDUSTRIAL TECHNOLOGY

435 Ellice Avenue
Winnipeg, Manitoba
R3B 1Y6

Ph: (204) 983-7692
Fax: (204) 983-3154

Contacts:
Mr. W.C. McGregor, Executive Manager
Mr. P.F. Kent, Marketing and Promotions Officer
Dr. M. Bakarat, Head, Robotics and Automation

Description:
The National Research Council's Canadian Institute of Industrial Technology (CIIT) is designed as a focal point for integrated research and development programs. CIIT provides a complete research environment for technical teams from Industry, University and Government. The institute fosters the formation of cooperative projects in areas such as computer integrated manufacturing, sensor-based robotics, vision systems and artificial intelligence. Situated at CIIT are the NRC's Robotics and Automation Section (R&A). The R&A section will commit their resources to work together with partners on strategic research and development tasks defined by the private company. CIIT is open to any organization with a research project in the making. Commitments can range from basing an entire operation at the institute to posting a small technical group with a specific problem to solve.

Featured Equipment:
ASEA IRB6 Robot and Robotic Welding Cell; 3D Vision System; VAX 8530 and VAX 8250; Evans and Sutherland Graphic Workstation; McDonnell Douglas Unigraphics Workstation and Software; Symbolics 3650 Workstation; 5 and 3 Access CNC Machines; CNC Swing Turning Centre.

Facilities:
17,000 m2 facility, including a 1,700 m2

Major Clients:
25 organizations from across Canada

CANMAG, CANADIAN ELECTROMAGNETICS LTD.

Bay 21, 1865 Sargent Avenue
Winnipeg, Manitoba
R3H 0E4

Ph: (204) 786-5515

Contact:
Mr. P. Klein, President

Description:
Canadian Electromagnetics Ltd. is a Winnipeg based affiliate of K & S Tool and Die Ltd. It was formed to provide a Canadian supplier to meet the International demand for focussing elements in the particle accelerator industry. Since its inception it has provided quadrupole and sextupole magnets to institutions in Canada and Europe. The ability of the Company to manufacture all the components of the finished product makes it unique in Canada.

Facilities:
8,250 sq. ft.

Major Clients:
University of British Columbia (TRIUMF accelerator), West Germany (HERA) and the University of Manitoba

Employees: 6

CLINICOM COMPUTING SERVICES INTERNATIONAL INC.

208-93 Lombard Avenue
Winnipeg, Manitoba
R3B 3B1

Ph: (204) 942-5335
Fax: (204) 943-5714

Contact:
Dr. Nancy Craven, Senior Consultant
Joan M. Rogers, Director of Marketing

Description:
CCSI is active in consulting, health care computing, system design and acquisition support, technology evaluation, strategic planning, and educational programs. It offers capabilities in research design/methodology, industrial and electronics database/information-communications, economic analysis, management, artificial intelligence, picture processing/image analysis. CLINICOM is interested in continued expansion in the health care and computing areas, as well as applications of expert systems to on-board diagnosis and management advice; telemetry of physiological data; medical ground support; astronaut health information systems; health status analysis and prediction.

Facilities:
Offices in Winnipeg and Toronto

Major Clients:
Health Sciences Centre, Wpg., Dupont Canada, Chedoke-McMaster Hospitals, Allergan Medical Optics, Shriners Hospitals.

Employees: 9

CYBERSHARE MANAGEMENT INC.

550 Berry Street
Winnipeg, Manitoba
R3H 0R9

Ph: 775-0181
Fax: (204) 889-0311

Contact:
Dr. A. Ballegeer, Director of Operations

Description:
Cybershare, with interest in satellite transmissions, has extensive experience in database services, networking and communications. A highly-skilled technical staff continues work in educational software including CAL and CAI, commercial, engineering and on-line computing services, and professional software application development.

Featured Equipment:
Computers
- Control Data Cyber 180/830
- Honeywell 66/440
- DEC 780 + DEC 785
- IBM MS/DOS Micros

Employees: 90

EXPORT PACKERS CO. LTD.

70 Irene Street
Winnipeg, Manitoba
R3T 4E1

Ph: 477-1830
Telex: 07-58764
Fax: (204) 475-7740

Contact:
Mr. Ron Tucker, Director of Operations
Mr. L. Carvalho, Manager-Technical Services

Description:
Export Packers, one of few non-US processors to have USDA certification, is a major exporter of food products and pharmaceuticals, serving four continents. An innovator in biotechnology, Export Packers has one of the largest chemical and microbiological quality control laboratories in Canada. It has solid experience in research and development, including enzymatic and micro-protein research, and continues its investigations into new biotechnology products.

Featured Equipment:
Ultrafiltration Equipment, Electrophoretic, High Pressure Chromatography and Freeze Drying.

Facilities:
The ultra-modern Federally inspected egg processing facility in Winnipeg is one of only a handful of U.S.D.A. certified egg processing plants outside of the United States, and this certification attests to the high quality of products while allowing access to the world's largest single export market.

Major Clients:
The company's food processing, wholesaling, and biotechnology industries has established it as a major exporter of food products and pharmaceuticals to four continents.

Employees: 90

HOMESTEAD COMPUTER SERVICES LTD.

1-1420 Clarence Avenue
Winnipeg, Manitoba
R3T 1T6

Ph: (204) 284-9830
Telex: 760-1141
Fax: (204) 453-2459

Contact:
Mr. Gary Craven, Director of Systems Development

Description:
Homestead is currently involved in the manufacturing of proprietary software and consulting services for the agricultural and financial sectors. Interested in expansion into the aerospace sector, Homestead has developed an Expert System for interpretation of LANDSAT images.

Major Clients:
Federal Land Banks in U.S.A., Sidney Future Exchange in Australia, Winnipeg Commodity Exchange, Department of Supply and Services

Subsidiaries:
Dealer network of 14 in Canada and 4 in United States.

Employees: 20

ICAM TECHNOLOGIES CORPORATION

317-435 Ellice Avenue
Winnipeg, Manitoba
Canada R3B 1Y6

Tel: (204) 957-[illegible]
Fax: (514) 697-8621

Contact:
Malcolm Crooks

Description:
Since its inception in 1971, ICAM Technologies Corporation has become a leading developer and supplier of advanced manufacturing software solutions for North America's aerospace, defence and automotive industries.

Featured Equipment:
APT Graphics Tutorial
Five Axis Apt Processor with Sculptured Surfaces
NC tool Path Verification Utility
Expert System for Post-Processing
Reverse/Conventional Tape Punch Processor
Two Dimensional CAD System
2-1/2 D Integrated CAM System
Flexible Automated Modeling and Scheduling System
Custom Programming Services

Facilities:
Strategically located in the CIIT building ICAM's modern facility is dedicated to training, research, development and marketing. These facilities are complemented by ICAM's head office located in eastern Canada.

Major Clients:
Canadair, Boeing of Canada, Allied Bendix Corp., Bell Helicopters, Northrop, McDonnel Douglas, NASA, Sandia National Laboratories

INTEGRATED ENGINEERING SOFTWARE LTD.

9-1329 Niakwa Road
Winnipeg, Manitoba
R2J 3T4

Ph: (204) 255-8995

Contact:
Norma Haakonstad

Description:
IES specializes in PC based programs for solving electrical and magnetic field problems. Current products include ELECTRO, used to design and analyze electrical and electronic equipment such as insulators, bushings, communication cables, printed circuit boards and transmission lines, and MAGNETO, used to design and analyze electro magnetic devices and components such as transformers, motors, magnets and charging fixtures.

Employees: 7

KRAUS INDUSTRIES LTD.

PO Box 250 (Transcona Postal Stn) Ph: (204) 224-1616
Winnipeg, Manitoba Telex: 07-57829
R2C 1A8 Telefax: (204) 222-0846

Contact:
Mr. Dan McCaroll, Director of Operations

Description:
Kraus is experienced in the marketing of specialized electronic products, and wholly owns COMPUTRONICS INTERNATIONAL and COMMAND START. Kraus maintains a full R&D staff, designing, manufacturing and marketing electronics products, with a speciality in microprocessor-based equipment. Geared to small run and mass production, Kraus has extensive penetration in petroleum industry markets, manufacturing a variety of self service consoles, motor fuel dispensing computers, including POS special products such as credit card validation. Kraus, with growing international markets, is looking for subcontracts in areas such as work on printed circuit boards, and smaller assembly work in such areas as sheet metal and wire harnesses.

Quality Standards:
C.S.A. Z299.2

Facilities:
18,000 sq. ft.

Major Clients:
Texaco, Inter City Gas, Petro-Canada, Shell Oil, Canadian Tire Inc.

Subsidiaries:
2 (Toronto, Canada and Dallas, Texas)

Employees: 43

LINEAR SYSTEMS LTD.

1760 Sargent Avenue
Winnipeg, Manitoba Ph: (204) 783-2228
R3H 0C7 Fax: (204) 783-0604

Contact:
Mr. Tom Thorsteinson, President

Description:
Linear Systems develops and manufactures O.E.M. computer boards. It specializes in commercial and industrial grade board level products which are compatible with Multibus and PC/AT computer systems. Linear has had it's standard products designed into systems and used by several major U.S. corporations and research institutions. Linear also manufactures a single board computer for embedded applications with small area network capabilities. In addition, Linear has designed turn-key computer based systems for use in the mining industry.

Facilities:
12 inch Wave Solder, PCad PCB design system, Logic analyser, PAL programming, Intel 310 development system, PC/AT based microprocessor development systems

Major Clients:
Harris Corp., Bridge Communications, Proteon Inc., General Electric, IBM Corporation, Hughes Aircraft, Lawrence Berkeley Laboratory

Employees: 10

MCALC

P.O. Box 6
Unversity Centre
Winnipeg, Manitoba
R3T 2N2 Ph: (204) 474-6621

Contact:
Dr. Eric McPherson

Description:
MCALC specializes in highly interactive instructional programming. The company is also particularly experienced in compressed visual displays.

Facilities:
Housed in the University of Manitoba complex

Major Clients:
Canadian School Districts — Direct & Site Licenses, Soloman Agricultural Institute

Employees: 10

MIND COMPUTER PRODUCTS

892 Portage Avenue
Winnipeg, Manitoba Ph: (204) 786-7747
R3G 0P4 Fax: (204) 786-1323

Contact:
Brad Fry, President

Description:
Mind Computer Products, a division of Myriad Innovative Designs Inc., is a leader in Manitoba's micro computer industry. The engineers at Mind boast the creation of the entirely unique Industrial Personal Computer (IPC), specifically designed for use on any industrial/manufacturing shop floor. Water proof, dust proof, and chemical resistant to name a few, the Mind IPC is designed to connect shop floor computers with a company's internal networking system, while being subject to the harshest of industrial environments.

As one of Manitoba's truly unique and innovative companies, Mind Computer Products excels in providing real time process control systems and software solutions in a wide variety of industrial, business and personal environments.

The focus at Mind, as we progress into the 1990's, is to provide solutions for the information age. This entails aggressive marketing strategies, superior product quality, and dedication to customer satisfaction and support.

Quality Standards:
CSA approved, 72 hour burn-in time

Facilities:
6,000 sq. ft.

Employees: 30

NORTHERN AERO INDUSTRIES LIMITED

114 McLaughlin Avenue
Winnipeg, Manitoba
R3J 2S5

Telephone: (204) 837-8002
Cable: NORAIR
Telex: 07-57281
Fax: (204) 831-7194

Contact:
W.G. Peters — President, General Manager
Harold Buchwald, QC. — Vice-President
A. Higham — Treasurer

Quality Standards:
A.G. Higam — Chief Inspector

Description:
Designer and Manufacturer of Cyclic De-Icing Sequence Timers: engine accessories to Rolls-Royce Dart Engine Systems, incorporated on FH227 Fairchild Hiller, F-27 Fokker, Herald, Gulfstream, Viscount aircraft.

Our product is incorporated as standard equipment on more than one hundred international and domestic airlines and is exported to over fifty countries.

Facilities:
Manufacturing plant and office in Winnipeg

Employees: 12

Subsidiaries:
Allied International Corporation,
5 Dakota Drive
Lake Success, New York 11042-1109
Contact: Mr. G. Sanky — Vice-President
Cable: "Alidinter" New York
Telephone: (516) 326-2244
Fax: (516) 326-2650
RCA Telex: 224022
WU Telex: 96-8453
MCI Int. Telex: 685 2409

PULSE ENGINEERING LTD.

300 Keewatin Street
Winnipeg, Manitoba
R2V 2R9

Ph: (204) 633-4321

Contact:
Mr. J. Campbell, Vice-President

Description:
Pulse Engineering, with fully equipped Repair and Testing laboratories, functions as DND-approved Standards Lab, a certified calibration lab, and specializes in electronic instrument repair, including speed meter sales and service. In addition, it has capabilities in working with 300 mph speedmeters, and in CAD, including board design.

Quality Standards:
Department of National Defense approved standards lab.

Featured Equipment:
Certified calibration lab.

Facilities:
Repair and test lab facilities

Major Clients:
Atomic Energy of Canada Limited, Federal Pioneer, Carte Electric, Boeing of Canada, Unisys, Westinghouse, CN Rail, CP Rail, RCMP

Employees: 10

QUANTIC LABORATORIES INC.

Suite 200, 281 McDermot Avenue
Winnipeg, Manitoba
R3B 0S9

Ph: (204) 943-2552
Toll Free: 1-800-665-0235
Fax: (204) 957-1158

Contact:
Dr. A. Wexler, President
Mr. Richard Facia, Manager, Marketing

Description:
Quantic Laboratories Inc. is a software development firm interested in aerospace opportunities. It has developed and markets an electronic CAE/CAD software program known as GREENFIELD™ which simulates transmission line characteristics such as cross-talk, ringing, time delay, etc. The simulation tool reduces wasteful prototyping and production delays.

Facilities:
5,000 sq. ft.

Major Clients:
Several of the leading companies in the electronics industry in North America and Europe.

Employees: 14

S.D.S. TECHNICAL DEVICES LTD.

P.O. Box 1998
Winnipeg, Manitoba
R3C 3R3 Ph: (204) 589-7507

Contact:
Mr. R. Taylor, President
Mr. R. Klisko, Technical Services Manager

Description:
Established in 1971. S.D.S. Technical Devices Ltd. has extensive experience in the alarm and industrial control field. Services and products include:

- Service and maintain RCMP radar
- Telephone circuit boards for MTS
- CCTV systems for museums, hotels and industry
- Environmental control and monitoring systems
- Access control systems
- Design and manufacture of industrial control systems
- All types of intrusion, fire, temperature, medical, alarm systems
- Medical Alert System

Facilities:
1,800 sq. ft. office, shop and assembly facilities, 7 installer technicians

Employees: 10

SHL SYSTEMHOUSE INC.

1150-330 St. Mary Avenue
Winnipeg, Manitoba
R3C 3Z5 Ph: (204) 944-9166

Contact:
Mr. Tom Hiebert

Description:
System integration, which is the supply of total information processing solutions by creating a combination of professional services, expertise and products from multiple vendors geared toward the unique requirements of the client.

Major Clients:
Bristol Aerospace, Standard Aero, Intercity Gas, Provincial Government, Great-West Life, Richardson Greenshields

Employees: 42 (1,700 in North America)

SOTA ELECTRONICS CORPORATION

12-1325 Markham Rd.
Winnipeg, Manitoba
R3T 4J6 Ph: (204) 261-3871

Contact:
Mr. Ken Maicher, Vice President

Description:
SOTA Electronics specializes in the manufacture of electronic components and subassemblies. SOTA has recently developed the capability of manufacturing MIL-spec transformers through an association with Magnetika, Inc. based in Los Angeles, California. This association with Magnetika has also provided SOTA with access to the design, development and manufacture of uninterruptable power supplies.

Facilities:
2,500 sq. ft.

Major Clients:
Magnetika (Subcontract work for Ratheon, RCA, Litton Guidance Systems, Hughes, McDonald Douglas)

Employees: 9

TOTAL SOFTWARE INC.

#6-1313 Border Street
Winnipeg, Manitoba
R3H 0X4 Ph: (204) 694-5328

Contact:
Shirley Thomasson, Director, Project Development

Description:
Total Software is a specialist in the creation of training programs for high-tech products and/or industry processes. The Company has experience in training for process control, as well as replicable courseware for training in the use of specific products. The development team is headed by a computer systems specialist and an educator with over 30 years combined experience in business.

Featured Equipment:
MS DOS microcomputers, QNX and UNIX based systems, LAN's

Employees: 6

Associates: 3

UNISYS CANADA INC.

Knowledge Systems Group
NRC Canadian Institute of Industrial Technology
435 Ellice Avenue
Winnipeg, Manitoba — Ph: (204) 786-8483
R3B 1Y6 — Fax: (204) 775-2252

Contact:
Mr. Douglas Broadhurst, National Program Manager

Description:
UNISYS Canada Inc., Knowledge Systems Group, has extensive experience in design, development and integration of knowledge-based systems, in technology transfer and in software rapid prototyping techniques. UNISYS development tools include Lisp machines, UNIX workstations, personal computers; delivery vehicles go from mainframe to microcomputer using third, fourth and fifth generation languages.

Facilities:
Knowledge Systems Centres in Toronto and Winnipeg. Partner Knowledge Systems Centres at Simon Fraser University, British Columbia Institute of Technology and Camosun College.

Major Clients:
National Research Council of Canada

Employees: 6

UNISYS CANADA INC.

Defence Systems
200 Saulteaux Crescent
Winnipeg, Manitoba — Ph: (204) 888-4222
R3J 3W3 — Fax: (204) 885-4334

Contact:
Mr. Ron Guimond, Director of Marketing

Description:
Unisys Canada Inc., Defence Systems, has extensive experience in the development and supply of computer hardware, ruggedized electronic processing equipment, and complex computer systems with broad military and civilian applications. Unisys products touch on a broad range of economic sectors, including MIL spec hardware, signal processing hardware, local area networks, communications systems, advanced systems architecture, and systems design.

Quality Standards:
AQAP-1 and AQAP-13

Featured Equipment:
Application Specific Integrated Circuit (ASIC) Design Centre, complete equipment capabilities in Random/Sinusoidal vibration temperature shock cycling, elevated ambient temperature burn-in and power merging/conditioning testing.

Facilities:
79,430 sq. ft.

Major Clients:
Lockheed Corporation, U.S. Navy, Canadian Department of National Defence, Paramax, Litton Systems, and British Ministry of Defence.

Employees: 420

UNIVERSAL ROBOTICS CORPORATION

62 Roslyn Road
Winnipeg, Manitoba — Ph: (204) 452-4544
R3L 0G6 — Fax: (204) 475-9480

Contact:
Mr. Randy Wallman, Executive Vice-President

Description:
Universal Robotics Corporation provides Information Seminars, Strategic Plans in Automation for Executive Management, and Implementation Studies in Flexible Automation for industrial manufacturers.

Their experience includes the following:

1. Computer Aided Design, Computer Aided Manufacturing
2. Robotic Applications in Welding, Spray Painting, Material Handling, Pick & Place, Fibreglass, Adhesives and Assembly
3. Material Flow Analysis and Plant Layout
4. Machine Vision
5. Various Hard Automation Projects

Contributions include the donation of the largest 5 axis articulated robot in Western Canada to the Robotics Lab at the University of Manitoba for student education and research into Computer Integrated Manufacturing.

Associates: 9

VADEKO INTERNATIONAL INC.

CIIT/NRCC Building
435 Ellice Avenue
Winnipeg, Manitoba
R3B 1Y6
Ph: (204) 956-2433

Contact:
Mr. Bill Bishop, Vice President, Sales and Marketing

Description:
Vadeko, an affiliate of Agra Industries Ltd. carries out innovative systems engineering in a broad range of industrial sectors, including aerospace, banking, transportation and high volume manufacturing. It is active in diverse technologies, including flexible automation, large scale robotic systems, underwater vehicles, industrial and military robot research, nuclear maintenance devices, space systems and 'thin film' deposition.

Vadeko is well known for its development of large-scale robotic painting systems based on Vadeko's own Off-Line Programming techniques. The CN Rail 'RPAS' hopper car painting system in Transcona is the largest off-line programmed, robotic painting system in the world. Development is currently underway on several turn-key facilities which use second-generation software to robotically paint military and large commercial aircraft.

Vadeko divisions are also producing large robots for major U.S. rocket motor manufacturers to perform various coating application and propellant inspection functions.

In addition to its Winnipeg operation, Vadeko maintains facilities in Ottawa and Mississauga, Ontario

Equipment (Winnipeg):
Graphics Workstations, CAD system, Paint Deposition Laboratory, Application Environment Enclosure, Electric Painting Robots, Deposition Thickness Instrumentation

Facilities:
Office, Lab and Shop space (Winnipeg): 5,000 sq. ft. (approx.)

VANSCO ELECTRONICS LTD.

661 Century Street
Winnipeg, Manitoba
R3H 0L9
Ph: (204) 775-8831
Fax: (204) 783-3556

Contact:
Mr. E. Van Humbeck, President

Description:
Vansco specializes in the development and manufacture of electronic instrumentation and controls. Its expertise includes industrial and vehicular instrumentation, data communication test sets, local area networks, sensor technology, scientific instrumentation and data loggers. Sixteen R&D workstations on a local area network run CAD software for microprocessor system development, circuit design and PC layout, and field programmable logic. Vansco's purchasing, manufacturing, testing and quality control stations are also networked to an integrated data base that includes work in process, completed orders and SPC and quality records.

Featured Equipment:
Wave soldering, vapour degreasing, connectorizing and fastener insertion equipment. Encapsulating equipment.

Facilities:
R&D workstations on local area network, CAD software for circuit design PC layout and field programmable logic, microprocessor development systems.

Major Clients:
Controlled Environments, Ford New Holland, Transport Canada, Manitoba Hydro, Motor Coach Industries.

Employees: 30

AEROTECH INTERNATIONAL INCORPORATED

100 Eagle Drive
Winnipeg, Manitoba
R2R 1V5

Ph: (204) 633-1999
Telex: 07-55272
Fax: (204) 694-1612

Contact:
Mr. Carl Meub, General Manager
Mr. Robert Morton, Marketing Manager

Description:
Aerotech International Incorporated is a leading supplier and manufacturer of portable heaters and ventilating equipment, including Herman Nelson heaters, ducting and a complete line of aerospace and airline ground support equipment and services. Aerotech supplies over 100 countries worldwide, and has dealers/distributors in offices around the world.

Aerotech International Incorporated was founded in 1973 by P.R. Sigurdson.

Facilities:
12,000 sq. ft. assembly shop, 10,000 sq. ft. machine and paint shop; 10,000 sq. ft. warehouse.

Subsidiaries: 1 — Spencer, Wisconsin

Major Clients:
NATO, Major Airline Companies, Government of Canada, Government of the United States

Employees: 30

BOEING OF CANADA LTD.

99 Murray Park Rd.
Winnipeg, Manitoba
R3J 3M6

Ph: (204) 888-2300
Telex: 07-57309
Fax: (204) 888-2951

Contact:
Mr. M. Sloane, Director Marketing

Description:
Boeing's Winnipeg facility is dedicated to the design, development, fabrication and testing of advanced fibre-reinforced composite material components for a variety of aerospace applications. It also manufactures aerial target systems. It has total engineering design capabilities (CAE and CAD) and has experience in the design and manufacture of satellite and missile components. Aerospace sector involvement would include composites fabrication relative to satellite structures and antenna reflectors.

Quality Standards:
AQAP-4, DND 1015/AQAP-1

Featured Equipment:
3 autoclaves (10' x 30' to 15' x 35') automated ultrasonic emission inspection.

Facilities:
250,000 sq. ft.

Major Clients:
Boeing Commercial Airplane Co., Department of National Defence, de Havilland.

Employees: 1125

CANADIAN TOOL & DIE LTD.

1331 Chevrier Blvd.
Winnipeg, Manitoba
R3T 1Y4
Ph: (204) 453-6833
Fax: (204) 453-3803

Contact:
Mr. J. Gatschuff, President
Mr. H.H. Roeder, Manager Specialty Engineering

Description:
Canadian Tool and Die has a strong reputation for quality in the manufacture of hydraulic cylinders, hubs, wheels, spindles and related components. For decades, it has been a supplier of component parts and assemblies to military subcontractors. Its highly qualified staff is versed in CAD and CAM systems work, and is interested in expanding production into space technology parts, custom machining and assemblies.

Quality Standards:
Q.C. Manual to C.S.A. Z299-2 and Department of National Defence DND1016

Facilities:
Large and small wheel manufacturing lines, press department, tool room, hydraulic cylinder test laboratory, cylinder assembly facility, Q.C. department, engineering department and warehouse. 66,680 sq. ft. building (53,744 sq. ft. production) 32,000 sq. ft. of compound area

Major Clients:
Ford New Holland & Thomas Equipment

Employees: 135

COMPOSITE TECHNOLOGY (CANADA) LTD.

69 Durand Road
Winnipeg, Manitoba
R2J 3T1
Ph: (204) 661-6412
Telex: 07-587511
Fax: (204) 661-9218

Contact:
Mr. P. Henderson, General Manager

Description:
Composite Technology is the authorized service centre for Bell, Aerospatiale, McDonnell Douglas and Schweizer Aircraft, and is involved in the overhaul and remanufacture of helicopter rotor blades. The company, a current holder of DSS contracts relating to helicopter blade service, is seeking to diversify into other aerospace activities and/or light manufacturing.

Quality Standards:
D.O.T. approved Inspection Organization No. 24-0002 and Defence DND 1015, AQAP-1

Facilities:
20,000 sq. ft.

Major Clients:
Aerospatiale, Agusta, Bell, M.B.B., Sikorsky, MDHC (Hughes), Schweizer

Subsidiaries:
1. Composite Technology International PTE Ltd. (Singapore)
2. Composite Technics, Inc. (Dallas, Texas, USA)
3. Composite Technology, Inc. (Stockton, CA., USA)

Employees: 15

CUSTOM STEEL PRODUCTS INC.

565 Marjorie Street
Winnipeg, Manitoba
R3H 0S8
Ph: (204) 783-2272
Fax: (204) 783-6588

Contact:
Ralph J. Eschenwecker, P.Eng., General Manager
Craig D. Wallace, Technical Programming Manager

Description:
Custom Steel Products Inc. (CSPI) is a 100% Canadian-owned company based in Winnipeg, Manitoba. To meet customer high-tech sheet metal needs, emphasis has been directed in four major sectors: standard and specialized metal equipment racks, consoles and panels for the communications industry; metal enclosures for both electrical and electronic protection; CNC custom punching to service a wide variety of industrial customers and O.E.M.'s; stringent quality control procedures (including S.P.C.) to meet today's aerospace and computer component high level of quality standards. CSPI has a recognized high quality paint department as well as full welding capabilities. CSPI has full CAD/CAM capabilities.

Quality Standards:
- AQAP-4

Featured Equipment:
- Promecam GH630Z Shear
- Promecam RG-103 110 Ton Brake
- Adira QH-3015 30 Ton Brake
- Rushworth 30/135 30 Ton Brake
- Strippit FC1000-III 33 Station CNC Punch Press
- Strippit FC1000-II 20 Station CNC Punch Press
- Strippit FC30/30 20 Station NC Punch Press
- Strippit TSAF30 12 Station Template Punch Press
- Three TIG/STICK welders
- One MIG Welder
- Three Spot Welders
- Full paint facilities incl: Two Bake Ovens, closed forced air spray boot, aluminum etching, phosphate prime, approved storage facilities
- Brown Boggs 15LW 40 Ton Press
- 1 Circle Shear
- 1 Three-Foot Roller
- 2 De-burring machines
- P2500 Scherr Tumico Profile Projector

Facilities:
14,000 sq. ft.

Major Clients:
Unisys Canada Inc.; Unisys Corporation, Texas; Transport Canada; Manitoba Hydro; Transalta Energy Systems; The Government of Canada; Atmospheric Environment; Canadian Broadcasting Corporation

Employees: 26

DIMATEC INC.

180 Cree Crescent
Winnipeg, Manitoba
R3J 3W1

Ph: (204) 832-2828
Fax: (204) 832-4268

Contact:
Mr. R.J. Wright, General Manager
Mr. Ian Sutherland, Marketing Supervisor

Description:
Dimatec Inc. is an established company supplying precision custom machining services to the Aerospace, Diamond Drilling and other selected sectors. It specializes in CNC Equipment and is qualified in machining engine and rocket components. Dimatec Inc. offers a full range of machine shop equipment, welding, and CAD/CAM capabilities.

Quality Standards:
Meets AQAP-4 Standards

Featured Equipment:
6 CNC machines, CAD/CAM Applicon — Schlumberger Sun 3/50 System, General machine shop equipment.

Facilities:
17,000 sq. ft.

Major Clients:
Bristol Aerospace, Midwest Drilling

Employees: 70

EPT MANUFACTURING LTD.

1000 Powell Avenue
Winnipeg, Manitoba
R3H 0H6

Telephone: (204) 632-0938
Fax: (204) 633-4314

Contact:
Ernie Enss, President

Description:
EPT Manufacturing Ltd. produces all types of Tooling up to 4,000 lbs. (Blanking and Forming Dies, Injection Molds, Forging Dies, Foundry Patterns, Shell Core Boxes, Machining and Assembly Fixtures) as well as Custom Machining and Fabricating.

Quality Standard:
As per Quality Control Manual

Featured Equipment:
3-axis Tnc Machining Centre with on board Graphics Display (4th axis capability), complete machine shop with Universal Milling Machines, Lathes, Grinders, Drill Presses, Granite Plate Inspection Table, Hardness Tester.

Facilities:
6,000 sq. ft.

Major Clients:
Argus Industrial Supply Ltd., Boeing of Canada Ltd., Dominion Bridge Co. Ltd., Farm King-Allied Inc., Motor Coach Industries Ltd., Westeel Agri, Products Company.

Employees: 7

FORT GARRY INDUSTRIES LTD.

460 McPhillips Street
Winnipeg, Manitoba
R2X 2G8

Ph: (204) 586-8261
Telex: 075-7594
Fax: (204) 956-1786

Contact:
Mr. R. Spitzke, President

Description:
Primarily involved in servicing the trucking industry, FGI has also been involved in aerospace, manufacturing forming bags used in packing insulation for Bristol Aerospace's Black Brant Rocket, the CRV7 rocket and the 17KS engine. Equipped with CAD and a full R&D staff complement, FGI has capabilities in breaking, punching, forming and welding of steel and aluminum, rubber and urethane coating, rubber molding and extrusion, and rubber to metal bonding. FGI is interested in ground support vehicles, vehicle equipment specialization, and specialized rubber base component applications.

Facilities:
24,000 sq. ft. Manufacturing
30,000 sq. ft. Warehouse

Major Clients:
Bristol Aerospace

Subsidiaries: 6

Employees: 160

FRANKLIN ENTERPRISES LTD.

43 Bunting Street
Winnipeg, Manitoba
R2X 2P5

Ph: (204) 633-9838
Telex: 07-57566
Fax: (204) 633-4318

Contact:
Mr. Zoltan Gergely, Jr., Vice-President
Mr. John Gergely, Marketing Manager

Description:
Franklin Enterprises is a highly qualified engineering and design facility, with extensive experience as a sub-contractor to commercial and military interests within the aerospace sector. Franklin is committed to technological innovation in the machining, fabricating and tool and die industries, and is capable of working with such diverse materials as SPS 245, Inconel Alloy 718, Astroloy, nylons and plastics.

Quality Standards:
Approved to AQAP-4 Standard

Featured Equipment:
3 CNC Vertical Machining Centers with 4th axis capability, 2 CNC Turning Centers with 3 axis capability, ICAM Technologies CAD/CAM Systems

Facilities:
20,000 sq. ft.

Major Clients:
Bristol Aerospace, Boeing Canada Ltd.

Employees: 17

HELI FAB LTD.

150 Cree Crescent
Winnipeg, Manitoba
R3J 3W1
Ph: (204) 889-0942
Fax: (204) 888-2912

Contact:
Mr. Raymond Haydaman, President

Description:
Heli-Fab is a specialized welding, sheet metal fabrication and heli-arc welding company serving the aerospace, transportation and communication sectors. Its product line ranges from assembly and sub-assembly fabrication and signal equipment manufacturing, to computer sub-detail manufacturing, and rehabilitation therapy equipment construction.

Quality Standards:
Heli-Fab's well-equipped Winnipeg plant offers quality control meeting AQAP-4 standards, and is staffed by qualified and certified personnel.

Featured Equipment:
Three Heli-Arc welders, five semi-automatic welders, one seam welder, one spot welder and sheet metal equipment.

Facilities:
15,000 sq. ft.

Major Clients:
S.E.D. Systems, Raytheon, Bristol Aerospace, M.B.B. Helicopter, Boeing of Canada, Unisys Canada Inc., Otto Bock Orthopedics, Manitoba Hydro, CP Rail and CN Rail.

Employees: 38

INVENTRONICS LIMITED

1420 Van Horne Avenue East
Brandon, Manitoba
R7A 6A4
Ph: (204) 728-2001
Fax: (204) 726-0807

Contact:
Mr. G. Thompson, President

Description:
Inventronics, specializes in fabricating, painting and assembling sheet metal components and products. They have extensive experience in a full range of manufacturing processes including welding aluminum, some types of stainless steel, wet and powder painting and chromate conversion coating. Products include components, cabinetry and chasis for telecommunications, electronic and electrical equipment, manufactured to MIL SPEC's. Areas of aerospace sector interest are primarily ground support systems.

Quality Standards:
- Quality program AQAP-4
  MIL-I-45208
  MIL-I-45662
- Welding MIG and TIG to MIL-W-1595A
- Coating MIL-C-5541

Facilities:
125,000 sq. ft.

Major Clients:
Raytheon, Litton, Bell Helicopter and Pratt and Whitney, Transport Canada, Supply and Services Canada, 3M Company, Alberta Government Telephones, Saskatchewan Telephones and Saskatchewan Power

Employees: 140

K & S TOOL & DIE LTD.

Bay 21, 1865 Sargent Avenue
Winnipeg, Manitoba
R3H 0E4
Ph: (204) 786-5515

Contact:
Mr. Peter Klein, President
Mr. John Wilson, Quality Manager

Description:
K & S Tool and Die Ltd. is a privately owned Canadian company which was founded in 1975. The company performs work for a wide range of industries including Aerospace, Electronics, Automobile, Food and Agriculture.

The company specializes in precision work involving Tool and Die, Jigs and Fixtures, Injection, Vacuum and Blow molds, EDM work and machining. K & S Tool and Die Ltd. also specializes in repair of molds, dies and precision tools.

Quality Standards:
AQAP-4 Standards (U.S. MIL-Q-9858A)

Featured Equipment:
Charmilles EDM machine, Deckel Copy Milling machine, lathes, milling machines, surface grinders

Facilities:
8,250 sq. ft.

Major Clients:
Bristol Aerospace, Boeing of Canada, Unisys Canada Inc., Northern Telecom Ltd., Otto Bock Othopedics of Canada, and Can Car Rail Inc.

Employees: 14

MANITOU MANUFACTURING CO. LTD.

551 Ferry Road
Winnipeg, Manitoba
R3H 0T5
Ph: (204) 783-2634

Contact:
Mr. Cy Crawford, President

Description:
Manitou has extensive experience within the aerospace sector, specializing in machining components, using NC and CNC equipment. With a strong complement of experienced and qualified machinists and operators, Manitou continues its pursuit of precision component machining.

Quality Standards:
DND-1016 Standard

Featured Equipment:
NC Milling and Turning

Facilities:
12,000 sq. ft.

Major Clients:
Bristol Aerospace, Standard Aero, Boeing, Aero Consulting Services, and A.E.C.L.

Employees: 10

SPECTRUM MANUFACTURING CO. LTD.

495 Madison Street
Winnipeg, Manitoba
R3J 1J2 Ph: (204) 885-5928

Contact:
Mr. H. Unruh, President

Description:
Spectrum with extensive experience in manufacturing metal products for the electronics, telecommunication and computer industries, most recently has completed the Air Traffic Control Centre console installation for Transport Canada. Spectrum is well diversified, with involvement in aerospace hardware for computer installations, exotic paint finishing, ultra finishing, prototype machining, and general Hi-Tech metal Fabricators.

Quality Standards:
- Department of National Defence DND 1016
- CAN3 — Z299.4

Facilities:
14,000 sq. ft.

Major Clients:
Bristol Aerospace, Spiroll Kipp Kelly (1984) Inc., Boeing of Canada, Royal Canadian Mounted Police, Kraus Industries, Northern Telecommunications, GEC, Otto Bock, Hydro, Transport Canada Air Traffic Departments, etc.

Employees: 28

SPIROLL KIPP KELLY (1984) INC.

1320 Church Avenue Ph: (204) 694-3084
Winnipeg, Manitoba Telex: 075-7180
R2X 1G4 Fax: (204) 632-4519

Contact:
Mr. W.A. (Bill) Zemlak, President
Ms. J.D. (Janet) George, Vice President

Description:
Spiroll Kipp Kelly (1984) Inc. is a state-of-the-art aerospace machining facility. Components are produced for airframe, engine, and electronic applications. Materials include aluminum, steel, tungsten, inconel, and a variety of nylons and composites.

Quality Standards:
- AQAP-4 and Mil/Din equivalents
- statistical process control if required
- serial number traceability if required

Systems:
- Honeywell on line real time MRP II manufacturing, sales order processing and financial systems
- large scale applicon CAD/CAM system with tooling, modelling, simulation and complex surface capability
- Intermec bar code data collection and inventory management, integrated to Honeywell systems
- full remote access to systems

Facilities:
- modern 25,000 sq. ft. plant
- complete range of CNC and standard machining, turning and grinding equipment

Major Clients:
Defence and aerospace prime contractors throughout North America and Europe

Employees: 60

Related:
- Spiroll Kipp Kelly (1984) Inc., Minneapolis, Minnesota
- Machine America Corporation, New Britain, Connecticut
- Precise-To-Form Castings Inc., Winnipeg, Manitoba

STANDARD AERO LIMITED

33 Allen Dyne Rd.
Winnipeg, Manitoba
R3H 1A1

Ph: (204) 775-9711
Telex: 07-57878
Fax: (204) 783-1421

Contact:
Mr. Richard T. Davies, Manager, Engineering Product Support

Description:
Standard Aero, a pioneer in the Western Canada aerospace industry, is an acknowledged specialist in the repair and overhaul of gas turbine engines and airframe components, serving both civilian and military interests. AQAP-1 certified, its experienced staff of engineers work in close cooperation with personnel of Standard Aero's affiliate centres, which are located across North America, and in England.

Quality Standards:
AQAP-1, Quality Approval DGQA

Facilities:
270,000 sq. ft.

Subsidiaries: 12

Employees: 810

STANDARD MACHINE WORKS LTD.

660 St. Matthews Avenue
Winnipeg, Manitoba
R3G 0G8

Ph: (204) 783-7001

Contact:
Mr. Norm Bickell, President

Description:
Standard Machine Works is universal in its industrial scope, providing a complete range of machining, manufacturing, tooling and welding services, including custom engine rebuilds. Standard Machine has experience in the provision of precision tooling for the aerospace sector. Its fully qualified machinists and mechanics have extensive experience in industrial, marine, and military applications of machine services.

Featured Equipment:
T.I.G. and M.I.G. Welding Equipment

Facilities:
13,000 sq. ft.

Major Clients:
Standard Aero, Boeing, Bristol Aerospace, Tupperware, Canadian Pacific Railways and Manitoba Hydro

Employees: 24

TECHNICAL PRODUCTS INTERNATIONAL LTD.

90 Durand Road
Winnipeg, Manitoba
R2J 3T2

Ph: (204) 669-6690
Fax: (204) 661-8657

Contact:
Mr. F. Wellink, President

Description:
TPI is currently involved in the manufacturing of electronic cable assemblies, featuring injection molded ends. In addition to this manufacturing capability, TPI utilizes a fully equipped machine shop for the fabrication of conventional and epoxy-resin mold tooling for prototype and short-run injection molds.

Working within MIL SPECS, TPI has specialized mold fabrication capabilities, and is in the active pursuit of contract work involving the development and/or manufacture of components for computer, telecommunication, and instrumentation applications.

Quality Standards:
MIL-I-45208A
CSA approved shop (File no. LR67481)

Featured Equipment:
a) 20 to 80 ton vertical injection molding machines c/w auxiliary driers and mold temp. controllers
b) 2 — pneumatic driven crimping presses
c) 2 — automated wire stripper
d) 1 — automated wire stripper/cutter
e) 1 — automated wire cutter
f) 1 — EDM c/w 3-dimensional orbiting head
g) 1 — 3-dimensional milling machine
h) 1 — Lathe
i) Surface Grinder

Facilities:
5,000 sq. ft.

Employees: 18

VANGUARD INDUSTRIES

530 Sheppard Street
Winnipeg, Manitoba
R2X 2P8

Ph: (204) 633-2546
(800) 665-7618

Contact:
Mr. Don Hedley, General Manager

Description:
Vanguard's large Winnipeg plant manufactures a range of fibreglass materials, including boats and other recreational products. Vanguard, a DSS-approved bidder, and with a QC program in place, is qualified in mould design and construction, and vehicle assembly, and has capabilities for ground station equipment manufacture.

Quality Standards:
Approved bidder for DSS

Facilities:
80,000 sq. ft.

Major Clients:
C.A.E.

Employees: 50

CADORATH PLATING CO. LTD.

2150 Logan Avenue
Winnipeg, Manitoba
R2R 0J2

Ph: (204) 633-9420
Fax: (204) 632-0323

Contact:
Mr. G. Cadorath, President

Description:
Cadorath Plating is a well established facility in Winnipeg specializing in electroplating for industry and agriculture. It has DND approval for electroplating work in chrome, silver, cadmium, sulphamate nickel, electroless nickel, zinc-chromate, nickel, copper, tin and lead indium.

Featured Equipment:
Salt spray cabinet test facility.

Facilities:
25,000 sq. ft.

Major Clients:
Standard Aero, Bristol Aerospace

Employees: 30

GUERTIN BROS. COATING & SEALANTS LTD.

50 Panet Road
Winnipeg, Manitoba
R2J 0R9

Ph: (204) 237-0241
Telex: 07-55172
Fax: (204) 233-5051

Contact:
Mr. Tony Guertin Sr., President

Description:
Guertin Bros. Coating & Sealants Ltd. specializes in the manufacture of paint and related products, aerosol packaging, industrial coatings, adhesives, potting and casting compounds, caulks and tapes. They supply autoclaving caulks and tapes to the aerospace industry.

Facilities:
74,000 sq. ft.

Major Clients:
Boeing of Canada, Bristol Aerospace, Heath Techna, McDonald Douglas, Canadair.

Employees: 80

PLASMA AND FLAME COATINGS LTD.

1975 Logan Avenue
Winnipeg, Manitoba
R2R 0H8

Ph: (204) 632-5585
Telex: 07-587870
Fax: (204) 694-3282

Contact:
Mr. J.W.H. Blott, President

Description:
Plasma and Flame Coatings does plasma and flame coatings on specialty parts for the paper, mining and aircraft industries.

Quality Standards:
Have QC program, QA manual and are a DSS approved bidder.

Featured Equipment:
Engine lathe 55' long and 66" diam. capacity; plasma transferred arc hard facing facility; complete blasting equipment

Facilities:
18,000 sq. ft.

Subsidiaries: 1

Employees: 21

PRECISE-TO-FORM CASTINGS INC.

19 Henlow Bay
Winnipeg, Manitoba
R3Y 1G5

Ph: (204) 489-4547
Fax: (204) 489-4417

Contact:
Mr. A. (Alan) Vesuwalla, President

Description:
Precise-To-Form Castings Inc. produces investment castings for the aerospace and defence industry. Castings are produced in aluminum, steel and super alloys. PTF has the only large scale vacuum melting facility in Canada.

Quality Standards:
- AQAP-4 and Mil/Din equivalents, modified to customer requirements where necessary
- statistical process control
- serial number traceability if required

Systems:
- Honeywell on line real time MRP II manufacturing, sales order processing and financial systems
- Intermec bar code data collection and inventory management, integrated to Honeywell systems
- full remote access to systems

Facilities:
- custom built 40,000 sq. ft. plant
- on site x-ray facilities
- heat treatment for aluminum and steel
- metallurgical, spectrographic and chemical laboratories

Employees: 50 current, 170 projected

Major Clients:
Aerospace, defence and turbine engine prime contractors throughout North America

Related:
Spiroll Kipp Kelly (1984) Incorporated, Winnipeg, Manitoba

AERO CONSULTING SERVICES LTD.

15 Hangar Road
Winnipeg, Manitoba
R2R 1Y4
Ph: (204) 783-5402
Fax: (204) 783-5436

Contact:
Lane Helms, Vice President, Engineering

Description:
Aero Consulting Services Ltd. provides design, development certification and testing services for modification and repair of aircraft. ACS has full engineering design and analysis capabilities including CAD, Finite Element, Aerodynamic, Aeroelastic Analysis, Flight Test Planning and data reduction. Through a subsidiary company, Aero Consulting International, ACS provides fracture mechanics and damage tolerance analysis.

ACS staff includes a Transport Canada DAR, AME cat B, and FAA approved DER in structures, systems, powerplants and flutter.

ACS has obtained Transport Canada and FAA approval for major modifications to many aircraft. ACS is capable of assuming full responsibility for Transport Canada approval for FAA certification of major aircraft modification projects, or provides engineering services in specialized areas to assist a client's engineering department.

Featured Equipment:
5 station Professional CAD system, NASTRAN Finite Element Analysis, Microfilm/Microfiche capability

Facilities:
3,000 sq. ft. office space

Major Clients:
Boeing of Canada Ltd., Bristol Aerospace Ltd., Air Ontario, Defence Research Establishment, Suffield

Employees: 15

A.J.P. ENGINEERING SERVICES

203-675 Pembina Highway
Winnipeg, Manitoba
R3M 2L6
Ph: (204) 477-4405
Fax: (204) 477-4890

Contact:
Mr. A.J. Pankratz, President

Description:
A.J.P. Engineering Services provides a broad range of technical services to industrial clients in Northern Ontario and Manitoba. The company specializes in welding technology and weld inspection. It has worked to military standards for aerospace clients.

Quality Standards:
Level 3 inspection for C.S.A. W178, A.S.M.E. standards, C.S.A. Z299.

Facilities:
Autocad design/drawing systems, word processing.

Major Clients:
Euroway, Heli-Fab, Dominion Engineering, Suncor Transport Canada

Employees: 6

CANADIAN FOOD PRODUCTS DEVELOPMENT CENTRE

810 Phillips Street
Portage la Prairie, Manitoba R1N 3J9
Ph: (204) 857-7861
Fax: (204) 239-5183

Contact:
Dr. Tam McEwen, Vice President

Description:
The Canadian Food Products Development Centre provides food, beverage and feed industries with resources and services needed to develop new and better food products and cost-effective production techniques. Services include:

- Food Product Development
- Product Formulation
- Ingredient Sourcing & Evaluation
- Shelf-life Studies
- Subjective and Objective Testing
- Microbiological Organism Identification and Enumeration
- Regulatory Compliance Assistance
- Development and Implementation of Quality Assurance and Plant Sanitation Programs
- Food Component and Contaminant Analysis and Quantification
- Pesticide Residue Analysis
- Selection of Laboratory Equipment
- Food Engineering
- Pilot Plant Facilities for Process Development, Test Market Production and Co-packaging
- Technical Advisory Services
- Specialized Food Library

Accredited by the Standards Council of Canada as a testing organization for specific tests registered with the Council.

Featured Equipment:
Computerized gas and liquid chromatography equipment; modified atmosphere packaging equipment; meat, dairy and vegetable processing lines; anaerobic growth chamber; pilot-scale fermentors; Instron texture measuring system; carbon dioxide freezers; complete sensory analysis facility; colour reflectance meter.

Facilities:
2,000 sq. m.

Major Clients:
McCain Foods, Readyfoods, Manco Dairies, Burns Meats, CSP Foods, National Research Council of Canada, Atomic Energy of Canada, Government of Canada Department of Supply and Services, Manitoba Liquor Control Commission, Bee Maid Honey.

Employees: 33

INDUSTRIAL TECHNOLOGY CENTER

Division of Manitoba Research Council
1329 Niakwa Road
Winnipeg, Manitoba R2J 3T4
Ph: (204) 945-6000
Fax: (204) 945-1784

Contact:
Mr. Lawrence Haberman, Vice President

Description:
The Industrial Technology Centre (ITC) is a full-service product design, development, and testing centre. ITC offers clients specialized and integrated services which address the entire product development cycle from concept to completion. These services include:

- Advisory Services
- Air Quality Monitoring
- Analytical Chemistry
- Application Specific Integrated Circuit Design
- Electronic Design
- Environmental Chemistry
- Equipment Retrofit
- Finite Element Analysis
- Hazardous Waste Monitoring and Testing
- Jig and Fixture Design
- Library Services
- Machine Design
- Materials Engineering
- Mechanical Design
- Noise Control
- Physical Testing
- Product Development
- Prototyping
- Printed Circuit Board Layout
- Software Development
- Surface Mount Design
- Transformer Oil Analysis
- Vibration Analysis

Accredited by the Standards Council of Canada as a testing organization for specific tests registered with the Council.

Featured Equipment:
Computerized Gas Chromatograph/Mass Selective Detector (HP), Vibration Analysis equipment (Zonic), VAX 11/780, c/w SDRC-IDEAS, Calma DDM, MTS, PC based CAD systems (Versa[illegible], Autocad, Anvil) Racal-Redac Relog & CADSTAR.

Facilities:
27,000 sq. ft.

Major Clients:
Allison Transmission Division of General Motors, Canadian Government, Manitoba Hydro, Motor Coach Industries, National Research Council, Spiroll Kipp Kelly, UNISYS Canada Inc., Westinghouse.

Employees: 45

INFOTECH MANITOBA

1970 Ness Avenue
Winnipeg, Manitoba R3J 0Y9
Ph: (204) 896-2212
Fax: (204) 831-8973

Contact:
Mr. Rod Sprange

Description:
Business development support to bring together business partners with the right capabilities and resources to capitalize on specific opportunities in the market place. Companies wishing to explore opportunities in Manitoba are furnished with assessments of market trends, available product viabilities and capabilities, and Manitoba's overall capabilities in the field of information processing technology.

Employees: 8

INSTITUTE FOR TECHNOLOGICAL DEVELOPMENT

Faculty of Engineering
University of Manitoba
Winnipeg, Manitoba
R3T 2N2

Ph: (204) 474-6200
(204) 943-8482
Fax: (204) 261-3475

Contact:
Mr. Ray Hoemsen, R&D Program Coordinator

Description:
Working as a part of the Faculty of Engineering, University of Manitoba, the Institute for Technological Development (ITD) is expert in technology transfer and industrial liaison in technological development. The ITD, functions as a facilitator to help industry to access the technological resources of the University of Manitoba, particularly in Engineering. The ITD also acts as a primary contact for the U of M with the Canadian Space Program.

The ITD, through a Contribution Agreement with the NRC, can help industry obtain scientific and technical knowledge, advice and assistance on a confidential basis.

The ITD also work closely with the Canadian Patent Office and the Canadian Industrial Innovation Centre.

IRIS SYSTEMS INC.

435 Ellice Avenue
Winnipeg, Manitoba
R3B 1Y6

Ph: (204) 947-9064
Fax: (204) 943-3803

Contact:
Mr. Michael Wiebe, President

Description:
Iris Systems Inc. is a consulting firm specializing in the aerospace, utility, healthcare and telecommunications industries.

Iris' skills focus on seven major areas which are:

- technology/business opportunity assessment
- technology brokering (sale or purchase)
- financing; venture capital, debt, etc.
- government funding: WDO, DRIE, DOC
- program management
- business strategy development; business, market, financial plans
- contract electronics R & D

Assignments are supported by an inhouse capability which includes:

- an electronics R & D lab containing $100,000 in equipment
- access to sophisticated technology and business data bases like Lexis/Nexis
- over 20 financial, project management, planning and support software programs, and
- a $40,000 library of specialized industry reports and studies

Major Clients:
DOC, NRC, NASA, Government of Manitoba, Western Diversification Office, The Transcapital Group, Goal Holding Corporation, Microelectronics Centre of Manitoba.

Employees: 6

KETAS CANADA INC.

P.O. Box 2550
Winnipeg, Manitoba
R3C 4B3

Ph: (204) 237-5840

Contact:
Mr. Ernest J. Klein, P.Eng., President
Mr. Traute Klein, B.A., B.Ed., M.A., Vice President

Description:
Applied Science Consultants in aerospace, energy, automation, custom microprocessor/computer, spatial and terrestrial telecommunication systems.

In addition, they provide statistical and financial analyses, systems management planning, project management, business and scientific translation services.

Employees: 2

LESTER M. GLANTZ, P.ENG.

512 Bower Blvd.
Winnipeg, Manitoba
R3P 0L8

Ph: (204) 889-2071

Contact:
Mr. Les Glantz, Consultant

Description:
Mr. L. Glantz is an aerospace business consultant providing services to both Canadian and International aerospace companies. Key functions include management consulting, technology assessment, technology transfer, research and development, marketing, new products search and acquisition.

Activities cover a broad range of categories, including instrumentation, communication and control, sensing and imaging, medical/dental, biotechnology, life sciences. These services are based on extensive management and engineering/scientific experience in aerospace, biomedical and complementary areas.

THE MICROELECTRONICS CENTRE OF MANITOBA

350-435 Ellice Avenue
Winnipeg, Manitoba
R3B 1Y6

Ph: (204) 956-5794
Fax: (204) 943-9206

Contact:
Mr. Alan J. Shade, General Manager

Description:
The Microelectronics Centre is located in the high-tech complex called the Canadian Institute of Industrial Technology along with 24 other companies. The Centre has been in operation for nine years and specializes in analog and digital system design. The general manager has had a background of over thirty years experience in aerospace, particularly in the communications, navigation, instrumentation and simulation fields and is very familiar with Mil Specs, Stds, etc. We have a small but highly competent staff with excellent electronic design and project management experience. The Centre does total turnkey system design, including follow through to mass production. We are capable of ASIC chip design and printed circuit board design, including surface mount and multi-layer up to 16 layers and have the necessary ties with industry to arrange manufacture. Our specialties are data acquisition, data analysis, graphic presentation, networking, and sensor development. The Centre also has experience in telecommunications, instrumentation and trouble shooting. We develop software in a wide variety of languages. The CIIT is equipped with three large VAX computers, as well as a considerable array of test equipment, to which we have access.

Featured Equipment:
Three Apollo computers with Mentor and Optimate software, NEC Powermate 386 with ANVIL software for mechanical CAD, QNX network with 10 design stations, analytical, data base management, and graphics software, microprocessor development systems.

Major Clients:
Westinghouse, RCA, GEC, Manitoba Hydro, Manitoba Telephones, CP Rail

Employees: 15

MIDWEST POWER PRODUCTS

1460 Waverley Street
Winnipeg, Manitoba
R3T 0P6

Ph: (204) 452-8244
Telex: 07-57726
TWX: 610-671-3579
Fax: (204) 452-2153

Contact:
Mr. B.D. Norrie, Vice-President/Sales Manager

Description:
A division of Midwest Detroit Diesel Ltd., Midwest Power produces packaged power systems utilizing General Motors "Detroit Diesel" or "Electro-Motive" diesel engines, as well as John Deere, Perkins and "Isuzu Diesel" engines. With worldwide market penetration, CSA approved products, and a QC program and QA manual in place, Midwest Power is providing quality service to the hydro electric, petroleum, mining and service sectors.

Quality Standards:
Have QA manual and QC program. Are an approved DSS bidder.

Specialized Equipment:
Vibration diagnostic equipment, Electric load banks capacity to 3500 KW

Facilities:
37,000 sq. ft.

Major Clients:
Northwest Territories Power Commission, Shell Canada Resources, B.C. Hydro, Gulf Canada Resources, Imperial Oil Services, Quebec Iron and Titanium, Bank of Montreal, Dome Petroleum, Manitoba Hydro, Saskatchewan Power Corporation, Echo Bay Mines Ltd., and Neptune Resources Corp.

Subsidiaries: 4

Employees: 65

RED RIVER COMMUNITY COLLEGE

C-7th Floor
2055 Notre Dame Avenue
Winnipeg, Manitoba
R3H 0J9

Ph: (204) 632-2291

Contact:
Mr. Glen Hermanson, Dean, Technology

Description:
RRCC is a comprehensive technical institute, with electronic laboratories, machine shops, a fully equipped manufacturing centre, and a CAD/CAM centre, with intergraph. RRCC offers extensive training opportunities in computer technologies, metallurgy, and the aerospace sector. It is fully capable of assuming prototype design work and training.

Featured Equipment:
Manufacturing centre, CAD/CAM (Intergraph), electronics labs.

Facilities:
College serving 25,000 students

Major Clients:
City of Winnipeg, Canadian Bronze, Delro Industries, Unisys Inc.

Employees: 650

SOUTH WINNIPEG TECHNICAL CENTRE

130 Henlow Street
Winnipeg, Manitoba Ph: (204) 488-2451

Contact:
Mr. Guy Hamel, Manager, Industry Training

Description:
South Winnipeg Technical Centre offers training and education in various industrial and business disciplines, including CAD, CAM, CNC manufacturing, automated systems, robotics, and electronics. SWTC staff include professional engineers, technologists, technicians, and journeymen. The Centre is in consultation with the aerospace sector, in the continued development of customized courses leading to improved efficiencies and skills of sectoral workers.

Employees: 50

SPIECE ASSOCIATES INC.

59 Shearwater
Box 268, Station A
Winnipeg, Manitoba
R3T 4V8 Ph: (204) 895-7743

Contact:
Mr. E.L. (Gene) Spiece, President

Description:
Spiece, currently on contract assignment with the Manitoba government, specializes in management and consultative work, strategic planning, product marketing, and information retrieval, with particular emphasis on the aerospace sector.

Featured Equipment:
Electronic information retrieval

Employees: 2

TARRY & ASSOCIATES LTD.

1209-600 Setter Street
Winnipeg, Manitoba
R2Y 2H7 Ph: 889-0346

Contact:
Mr. R.J. Tarry, P.Eng., CMC

Description:
Tarry & Associates Ltd. is a general management consulting firm specializing in the areas of marketing, business planning, feasibility studies and government program liaison. A variety of assignments have been carried out for both large and small sized Canadian aerospace firms and for government departments and industry associations concerned with development of Canada's aerospace industry.

TECHNICAL RESEARCH INVESTIGATIONS & DEVELOPMENT (TRIAD) LTD.

787 Haney Street Ph: (204) 885-6099
Winnipeg, Manitoba Telex: 075-87870
R3R 0Y7 Fax: (204) 943-6915

Contact:
Dr. E. Thompson, President

Description:
TRIAD Ltd. is an R&D oriented consulting firm, specializing in materials, electronics and chemistry.

Employees: 3

UMA ENGINEERING LTD.

1479 Buffalo Place Ph: (204) 284-0580
Winnipeg, Manitoba Telex: 07-57562
R3T 1L7 Fax: (204) 475-3646

Contact:
Mrs. Robert Petri
Mr. Carl Anderson

Description:
UMA Engineering Ltd. is the principal company of the UMA Group offering expert and diverse engineering capabilities ranging from structural, mechanical, electrical, instrumentation, agricultural, construction management, engineering surveying, environmental, civil, transportation, planning, landscape architecture, geotechnical, geological, hydrogeological and remote sensing.

Within the aerospace sector, UMA is active and interested in industrial plant design, construction management, remote sensing and satellite imagery analysts and other work related to engineering and environmental applications.

1) Computer facilities within the Company include a Prime 750 installation and two Prime 450 installations, all networked through Datapac, and accessed by high speed terminals in the various offices. It also includes IBM PCs with up to 512 K of memory and an IBM AT with 640 K of memory, and 30 Mb of hard disk storage and 1 Laser jet printer.
2) Complete photogrammetric mapping services are offered through Western Photogrammetry, a division of UMA Engineering Ltd. Equipment currently consists of a Wild BC1 Analytical Stereoplotting System Controlled by a Nova 4X Mini-Computer; a Wild A10 Semi-Analytical Stereoplotting Instrument; a Zeiss Jena Stereometrograph — 1st order plotter; a Wild B85 Stereoplotting Instrument; and the PATM-43 Block Adjustment program for aerial triangulation.

Facilities:
38,000 sq. ft. in Winnipeg

Major Clients:
Industry and Government in all sectors.

Subsidiaries: 10

Employees: 1,000 (120 in Winnipeg)

UNIES LTD.

1666 Dublin Avenue
Winnipeg, Manitoba
R3H 0H1 Ph: (204) 633-6363

Contact:
Mr. Gordon Spafford

Description:
Unies Ltd., consulting engineers, specialize in remote sensing interpretation, energy systems and analysis, water management, hydraulics and hydrology. Current facilities, which include air quality monitoring equipment and hydraulic equipment, are supportive of company efforts to increase involvement in energy control and supply, and remote sensing work.

Facilities:
4,000 sq. ft.

Major Clients:
Manitoba Government, Canadian Government, construction industry, legal

Employees: 7

UNIVERSITY OF MANITOBA ACCELERATOR CENTRE

Room 223, Allen Building
Winnipeg, Manitoba
R3T 2N2 Ph: 474-9378 or 474-9817

Contact:
Dr. Jasper S.C. McKee, Director

Description:
The Accelerator Centre has the capacity to simulate the solar wind and measure the effect of proton bombardment on materials and devices including computer components. Its facilities can also be used to modify the near surface regions of materials by implanting ions with appropriate energy into them. The Centre has access to neutral hydrogen beams of high flux for civil studies, and is capable of microbeam analysis of materials. Centre staff are expert in vacuum technology, ion source development, computer control, software generation and other aspects of accelerator physics and technology. Current Centre projects include production of radiopharmaceuticals, elemental analysis of medical tissue and ore bodies, research using neutral beams, and implantation studies.

Featured Equipment:
Spiral Ridge Cyclotron (20-50 Mev protons) and a Linear Ion Implantation Accelerator (120 keV)

Major Clients:
Canadian Federal Government

Employees: 5

THE UNIVERSITY OF MANITOBA

Department of Mechanical Engineering and Industrial Engineering Program
Ph: (204) 474-9803
Telex: 07-587721
Fax: (204) 261-3475

Contact:
Dr. T.R. Hsu, Professor and Head

Description:
The Department of Mechanical Engineering and Industrial Engineering Program has a comprehensive array of technical expertise, including but not limited, to the following:

- Design and development of computer vision and pattern recognition systems for special applications.
- Development of special CAD/CAM softwares, finite element analysis and graphics packages.
- Material testings and evaluation, failure analysis, fault detection process design.
- Material properties measurements, special heat treating methods, development of special processes.
- Heat transfer and fluid flow in microgravitational environment effective cooling of microelectronic systems.
- Machine tools controls and integrations.
- Kinematics, robots and manipulator systems design.

Employees: 50

THE UNIVERSITY OF MANITOBA

Geophysical Imaging Laboratory
Room 306-309 Wallace Building
Winnipeg, Manitoba Ph: (204) 474-9833
R3T 2N2 (204) 269-4470
E-Mail: WMOON@CCM. UManitoba.CA
GEOPOO@CCM. UManitoba.CA

Contact:
Dr. Wooil M. Moon, Research Coordinator

Description:
The Geophysical Imaging Laboratory at the University of Manitoba has the capability of developing computer software and processing air-borne and satellite-borne geophysical and remote sensing data. The geophysical data being processed include data sets from SEASAT (NASA), MAGSAT (NASA), LANDSAT series, SPOT, SIR-B (NASA Shuttle), NOAA satellite (AVHRR) and ERS-1 (to be launched by the European Space Agency). Currently active research programs include development of the digital SAR (Synthetic Aperture Radar) processing algorithm for geophysical applications, integrated imaging research for multi-frequency/multipolarization data sets and research on the fast data compression techniques. The researchers at the Laboratory have also extensive experience in carrying out and processing seismic projects for oil and gas exploration and nuclear waste disposal site study.

Facilities:
ARIES II image analysis workstation on VAX 11/750 host running ARIES software, UNIRAS software, IEEE digital data processing algorithm, SAC (Seismic Analysis Code) and other utility softwares. Access to the CRAY super-computer (Toronto) using the VAX as front end processor. Macintosh II, MS-DOS microcomputers and high resolution graphics workstations interfaced to VAX 11/750 running GIS (Geographic Information System) and other Raster/Vector graphics packages. Two seismic recording systems, each with 24 ch and 48 ch capability for the conventional and multi-offset VSP seismic projects.

Major Clients:
Canadian Federal Government, Manitoba Provincial Government, Atomic Energy of Canada Ltd.

Research Associates: 6

WEST-CAN INSPECTION LIMITED

22 Ranch Road Ph: (204) 668-7327
Winnipeg, Manitoba Telex: 07-57741 (Brick House)
R2G 3E1 Fax: (204) 668-7347

Contact:
Mr. Edward Wachal, General Manager, Western Division
Mr. Larry R. Russell, V.P. Technical Operations

Description:
West-Can Inspection is a testing laboratory, offering quality assurance inspection and non-destructive analysis of materials and components. West-Can is experienced in aircraft structural inspection, rocket motor testing, and various cast product inspection, carried out by a skilled, certified staff utilizing a full range of non-destructive test equipment. Its prime interests within the aerospace technology program is the research and development of new materials and component fabrication for engineered segments of the program.

Featured Equipment:
Non-destructive Test Methods Radiographic, Ultrasonic, Eddy Current, Liquid Penetrant, Magnetic Particle

Facilities:
1500 sq. ft.

Major Clients:
Imperial Oil, Trans Canada Pipeline, Bristol Aerospace, Standard Aero, Air Canada

Subsidiaries: 3

Employees: 20

G.K. YUILL & ASSOCIATES LTD.

1441 Pembina Highway
Winnipeg, Manitoba Ph: (204) 474-2461
R3T 2C4 Fax: (204) 453-0691

Contact:
Dr. G.K. Yuill, President

Description:
G.K. Yuill & Associates Ltd. is a research and development consultant providing mechanical engineering services to a wide range of Canadian firms. They specialize in computer models and test methods for heat transfer and thermodynamic problems.

Major Clients:
National Research Council

Employees: 10

PROJECT MANAGEMENT

ATOMIC ENERGY OF CANADA

Whiteshell Nuclear Research Establishment
Pinawa, Manitoba
R0E 1L0

Ph: (204) 753-2311
Telex: 07-57553
Fax: (204) 753-8404

Contact:
Mr. R. Sochaski, P.Eng., Manager, Commercial Operations

Description:
The WNRE at Pinawa, Manitoba, is a diverse research and development establishment with a broad range of technological capabilities well suited to a wide variety of space program projects. Some of these capabilities include: space power conversion system development; materials and component testing and analysis; prototype equipment design and construction; materials development for special space applications; and analysis of biological and materials effects of space environment.

Facilities:
- Fracture Mechanics Centre — offering complete metallurgical and mechanical testing of ferrous and non-ferrous metals, ceramics, glasses, rocks and composites.
- Analytical Science — offering a complete range of analytical facilities for inorganic, ultra-trace and environmental analysis as well as surface analyses and microscopy.
- Irradiation Facilities — to stimulate space environment conditions and effects on materials and components.
- Hydrostatic Test Facility — for container and component testing.
- Containment Test Facility — for combustion analysis of flammable gaseous and dust mixtures.
- Internal Friction Laboratory — to develop, test and apply high damping materials in engineered systems to suppress noise and vibration.
- Large Machine Shop — outfitted with modern equipment for manufacture of prototypes, tools and components.

Expertise:
- Experience in power conversion systems suitable for space applications using either photovoltaic, radioisotopic or nuclear reactor power systems.
- Experience in determining the effects of Radiation and Atomic Oxygen on materials and living systems and recommending methods to alléviate those effects.
- Biophysical research with experience in virology, cell biology, radiobiology, biochemistry and biophysics.
- Experience in joint-venture and partnership arrangements.
- Quality Control and Non-Destructive Examination Services using full range of examination techniques.
- Use of radiation curing to produce unique plastic and composite materials for the space industry.

Subsidiaries: 3

Employees: 1000

BRISTOL AEROSPACE

P.O. Box 874
Winnipeg, Manitoba
R3C 2S4

Ph: (204) 775-8331
Telex: 07-57774
Fax: (204) 885-3195

Contact:
Mr. Keith F. Burrows, Vice President — Marketing and Contracts

Description:
Bristol Aerospace is a cornerstone on which the Aerospace Sector of Manitoba is built. Engineering, manufacturing and rocket propellant plants produce:
- Black Brant Sounding Rockets
- CRV-7 Rocket weapon systems
- Jet engine and Propulsion components
- Airframe components
- Helicopter wire strike protection systems
- space science systems
- aircraft repair and overhaul

In the area of Project Management, Bristol is the principal industrial support centre for the CF-5 and will upgrade and extend the life of the CF-5 Freedom Fighter into the 21st century. Total systems engineering provides support for a complete avionics-suite update and repair and overhaul, including:
- Wings (ribs, spars and lower skin replacement)
- Dorsal Longeron replacement
- Vertical Stabilizer (improved design)
- aft fuselage former replacement
- flight control system upgrade
- landing gear replacement
- aircraft rewiring and repainting

Quality Standards:
AQAP-1, DND1015, MIL-Q-9858A

Facilities:
700,000 sq. ft.

Major Clients:
NASA, ESA, National Research Council, AECL, Department of National Defence, General Electric, Pratt & Whitney, Rolls-Royce, Boeing, Raytheon, The Air Forces of various countries

Employees: 1,400

WARDROP ENGINEERING INC.

77 Main Street
Winnipeg, Manitoba
R3C 3H1

Ph: (204) 956-0980
Telex: 07-57487
Fax: (204) 957-5389

Contact:

Mr. D.R. Grimes, President
Mr. W.D. Christie, Vice President

Description:

Wardrop Engineering Inc. provides engineering services to a broad range of industrial clients throughout the world. Services include studies, design, project management, construction services, planning, engineering analysis, third world expertise and prototype development.

The Company offers a wide range of engineering disciplines which include aerospace, mechanical, chemical and process, structural/civil, electrical, computer, public works, transportation, control and instrumentation, hydrotechnical and hydrogeological.

Wardrop personnel have expertise in space systems engineering, aerospace ground support equipment, robotics and remote handling, specialized equipment, computer modelling and environmental test facilities.

At this time Wardrop Engineering is seeking additional aerospace opportunities to further expand and develop its aerospace division.

Featured Equipment:

Vax 11-750, 2 MicroVax's. Personal Computers (1 - 386, 6 - AT's and 2 - XT's) and Autocad Systems.

Facilities:

27,000 sq. ft.

Major Clients:

National Defence, National Research Council, SPAR Aerospace, SED Systems, European Space Agency, Atomic Energy of Canada, City of Winnipeg

Subsidiaries: 3

Employees: 180 (110 in Winnipeg)

For more information on the Manitoba Aerospace Technology Program or additional copies of this directory contact:

Manitoba Aerospace Technology Program
430 - 155 Carlton Street
Winnipeg, Manitoba R3C 3H8
Phone: (204) 945-0127
FAX: (204) 957-1793
Telex: 07-587833